Remarks/Arguments

Reconsideration of this application is respectfully requested.

Claims 1-5, 8, 10-16, 19, and 21-28 are pending in the application, with claims 1, 12, 23, and 24 having been amended, and claims 6, 7, 9, 17, 18, and 20 having been previously canceled. Support for the amendments to claims 1, 12, and 23 appears in the application as filed beginning on page 2 at line 15. Entry of these amendments is respectfully requested as it is believed they place the application in condition for allowance or in better condition for appeal.

Claims 1-3, 10, 12-14, and 21 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. (GB Patent Appln. No. 2,193,972 A) in view of Emert et al. (U.S. Patent No. 5,498,809) and Bennett (U.S. Patent No. 4,925,582).

Claims 4, 5, 15, and 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of two Crompton Corporation press releases.

Claims 4 and 15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al., Emert, and Bennett and further in view of Calbrese et al. (U.S. Patent No. 6,348,514).

Claims 8 and 19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert et al. and Bennett and further in view of Yamazaki et al. (U.S. Patent No. 6,075,065).

Claims 8 and 19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert et al. and Bennett and further in view of McEntee (U.S. Patent No. 4,624,679).

Claims 1-3, 10-14, and 21-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields (U.S. Patent No. 5,981,632).

Claims 23-28 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of Crompton Corporation.

Claims 23-25 and 27 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of Calbrese et al.

Claims 23 and 24 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of Yamazaki et al.

Claims 23 and 24 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of McEntee.

Csikos et al. disclose a coolant-lubricating liquid composition containing organic polysulfides and usable in cutting and non-cutting cool-shaping metals, mainly steel alloys, that comprises an organic polysulfide of the general formula

$$(R^{I-V}\text{-}Ar_b)_c(S_x)_d$$

wherein

R^I, R^{II}, ... R^V are the same or different and each stands for a hydrogen atom, a C_{1-40} straight or branched chain or cyclic saturated and/or unsaturated hydrocarbyl group and/or a derivative thereof;

Ar stands for a monocyclic and/or polycyclic aromatic hydrocarbyl group and/or a derivative thereof;

b is an integer from 0 to 5;

c is an integer from 2 to 10;

d is an integer from 1 to 9; and

x is an integer from 1 to 6.

Emert et al. disclose oil soluble copolymers derived from ethylene and 1-butene which have a number average molecular weight between about 1,500 and 7,500, at least about 30 percent of all polymer chains terminated with ethylvinylidene groups, and ethylene-derived content of not greater than about 50 weight percent, and which form solutions in mineral oil free of polymer aggregates, as determined by light scattering measurements. Lubricating oil additives, particularly dispersants, produced by the functionalization and derivatization of these copolymers are said to have enhanced performance (e.g., improved dispersancy and pour point) in lubricating oil compositions, attributable in part to the combination of properties characterizing the copolymers.

Bennett discloses that alkane alkanolamines of the formula

$$RNHR^1OH$$

wherein R is hydrogen or normal C_{1-6} alkyl; and R^1 is a normal or branched chain C_{2-4} alkyl or hydroxymethyl C_{2-4} alkyl are effective to potentiate the activity of and prolong the useful life of antimicrobial agents in controlling the growth of microorganisms in industrial water based fluids. A specific example of the alkanolamines of this invention is n-hexyl ethanolamine.

The Crompton Corporation press releases disclose the commercial availability of Naugalube® 438L, Naugalube 640, and Naugalube APAN.

Calabrese et al. disclose an isocyanate-reactive composition comprising an isocyanate-reactive compound having an equivalent weight of from about 400 to about 12000, and a stabilizing amount of methyl 3-(4-hydroxy-3,5-di-tert-butylphenyl)propionate with optional

costabilizers selected from another phenolic, an amine, a phosphite, a thioether, or a lactone stabilizer to form a stabilizer package which may be further used in a process for preparing a flexible polyurethane foam comprising reacting together an organic polyisocyanate with an isocyanate-reactive composition in the presence of a blowing agent to form the polyurethane foam.

Yamazaki et al. disclose a photocurable resin composition which inhibits the deactivation of a bisacylphosphine oxide-series photopolymerization initiator and is said to be useful for coating optical fibers. The photocurable resin composition comprises (A) a polyurethane (meth)acrylate oligomer, (B) an ethylenically unsaturated compound, (C) a bisacylphosphine oxide-series photopolymerization initiator, and (D) a tertiary amine and no tin component. Incorporation of the component (D) inhibits the decomposition and deactivation of the component (C). The component (A) may contain an aliphatic C_{14-40} polyol (hydrogenated dimerdiol, 12-hydroxystearyl alcohol) as a polyol component. This resin composition is used for a primary coating of a glass fiber or an indirect coating of an optical fiber through the primary layer, the coating layer being cured by light irradiation to provide an optical fiber coated with the resin composition.

McEntee discloses a composition of an antimicrobial agent and an antioxidant said to have improved antimicrobial activity compared to the antimicrobial agent alone. The preferred environment is a composition of a thermoplastic resin, an antioxidant, and an antimicrobial agent, the latter two being compatible with the resin. The resin composition can contain other usual additives, and can be melt processed at an elevated temperature to form articles such as films or fibers having improved antimicrobial activity. A method for

improving the efficacy of an antimicrobial agent by combining it with an antioxidant is disclosed. A method for melt-processing a resin composition containing an antimicrobial material is also disclosed, wherein the resin composition includes an antioxidant.

Fields discloses a product and method for making an asphaltic emulsion that is said to have the weather-resistant and durability advantages of a fully-oxidized asphaltic base. Preferred compositions comprise a fully-oxidized asphalt having a softening point of between about 110°F. and about 160° F. and a slurry, the slurry comprising water, a colloidal clay (preferably bentonite clay), barium chloride, and citric acid. Optionally sodium dichromate, fillers such as cellulose fibers, and biocidal agents are added as well.

Csikos et al., the primary reference, discloses a coolant-lubricating liquid composition, which, if desired, may contain an oxidation inhibitor and a biocide additive, along with a significant number of other additives. The specification points out, however, on page 2, beginning at line 48 that the carrier - another component of the composition - *does not need any oxidation inhibitor* since the organic polysulfide - still another component - contains active sulfur which is transformed at higher temperatures to tetra- and hexavalent sulfur of *oxygen-acceptor character*. In other words, you can put the oxidation inhibitor and biocide additive in if you want to, but there's really no need. This can hardly be held to be a teaching that there is an advantage, let alone the possibility of synergistic results, in using a combination of antioxidant(s) and biocide(s), which is what the present invention is all about. The only specific teaching of oxidation inhibitors is directed to 2,6-tert-butyl-p-cresol, alkylated dimethylamine-tert-butylphenol, triethyleneglycol-bis-propionate, and phenyl-2-naphthylamine. Further, the only disclosure of biocides that might be used is directed to

cetyl-pyridinium-chloride, cetyl-pyridinium-bromide and trimethoxynitromethane, none of which are within the scope of the current claims. It is, of course, possible, that one or more of the listed oxidation inhibitors might be useful in the practice of the present invention; however, there is no teaching or suggestion that there would be any advantage in using them with a biocide selected from the group consisting of triazines, phenols, morpholines, formaldehyde releasers, azoniatricyclodecanes, omadines, and oxazolidines, particularly a biocide selected from the group consisting of 1,3,5-tris(2-hydroxyethyl)-S-triazine, hexahydro-1,3,5-tris(2-hydroxyethyl)-S-triazine, hexahydro-1,3,5-triethyl-S-triazine, hexahydro-1,3,5-tris(2-hydroxyethyl)-S-triazine iodine complex, and 1-(3-chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride), preferably 1,3,5-tris(hydroxyethyl)-s-triazine.

It is understood to be the Examiner's position that although the claimed antioxidants and biocides may, or may not, be disclosed in Csikos et al., the secondary references show many, if not all, of these compounds are known in the art and, thus, it would be within the skill of the ordinary artisan to put them together in the manner taught by Csikos et al. and come up with the present invention.

In the specification, Applicants have pointed out that many of the operable antioxidants and biocides are known in the art, and, indeed, have indicated preferred ones by their commercial designations. Thus, the cited secondary references add little or nothing to what has already been acknowledged: Applicants have found a novel combination of ingredients, many of which are previously known individually, that bring about superior or even synergistic improvements in the properties of metalworking fluids that were previously unknown and unobvious to those of ordinary skill in the art having the advantage of a

knowledge of the cited art. There is nothing in the references that would motivate such a person to employ an inhibitor, which Csikos et al. teach isn't really needed, and combine it with a narrowly defined group of biocides to come up with the improved metalworking compositions of the present invention.

Further, the claims have now been amended to be directed to *prelube* metalworking fluids. As noted in the present specification, the use of separate rust preventive oils and drawing lubricants has been in some instances replaced by the use of a single composition known as a prelube. Prelubes are generally applied at the steel mill during temper rolling or inspection, as was done with rust preventive oils, prior to shipping and are not intentionally removed from the metal until after the blanks are cut and the parts formed. Thus, the use of such prelubes eliminates the steps of removing the oil and applying a drawing lubricant before further working.

Prelubes thus must function as both a rust preventative and drawing lubricant. In many instances, and particularly for automotive and appliance applications, a prelube must be: (a) removable with alkaline cleaners, (b) non-staining to the metal, and (c) compatible with other chemicals utilized in producing the products in question.

As to metal staining, there are at times instances where steel coils are stored for long periods before use. Some substances may oxidize during storage and the oxidation product may adversely affect the metal, for example, by the oxidation of oils to fatty acids, which stain steel sheets, particularly mild steel sheets. Hence, industries in which storage periods are not uncommon require prelubes or other substances in contact with the metal during storage that are substantially non-staining. Additionally, with time these oils may be subject

to attack by microorganisms yielding substances that may be detrimental to the desired properties of prelube.

It is submitted that none of the cited art discloses or suggests the special requirements of such prelubes, nor the means for meeting those requirements, which is the subject of the present invention.

It is therefore requested that the rejections of:

claims 1-3, 10, 12-14, and 21 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert et al. and Bennett;

claims 4, 5, 15, and 16 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of two Crompton Corporation press releases;

claims 4 and 15 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al., Emert, and Bennett and further in view of Calbrese et al.;

claims 8 and 19 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert et al. and Bennett and further in view of Yamazaki et al.;

claims 8 and 19 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert et al. and Bennett and further in view of McEntee;

claims 1-3, 10-14, and 21-22 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields;

claims 23-28 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of Crompton Corporation;

claims 23-25 and 27 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of Calbrese et al.;

claims 23 and 24 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of Yamazaki et al.; and

claims 23 and 24 under 35 U.S.C. 103(a) as being unpatentable over Csikos et al. in view of Emert and Fields and further in view of McEntee be withdrawn.

In view of the foregoing, it is submitted that this application is in condition for allowance and an early Office Action to that end is earnestly solicited.

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